George G. Vega Yon

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e-mail	g.vegayon@gmail.com
website	ggvy.cl
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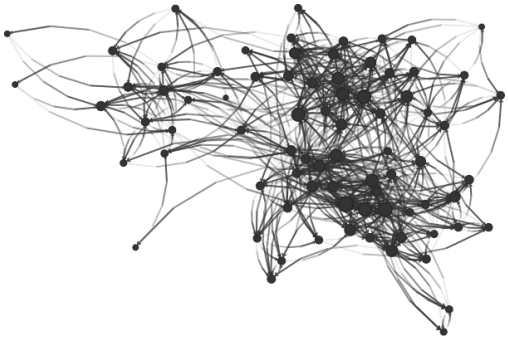

Education

Ph.D. in Biostatistics (with concentration in Statistical Computing) 2020
University of Southern California, USA
Dissertation title: *"Essays on Bioinformatics and Social Network Analysis: Statistical and Computational Methods for Complex Systems"*

M.Sc. in Social Sciences (with concentration in Economics) 2016
California Institute of Technology, USA

Master in Economics and Public Policy 2011
Universidad Adolfo Ibáñez, Chile

BS. in Business Administration (with a minor in Political Science) 2011
Universidad Adolfo Ibáñez, Chile

Awards

Travel Grant, Society of Young Network Scientist 2019
Fellowship, California Institute of Technology 2014
Honorable Mention (Posters Session) Chilean Economics Society 2012
Scholarship, Universidad Adolfo Ibáñez 2006

Major Areas of Research Interest

Social Networks and Complex Systems
Statistical Computing
Scientific Software Development
Non-parametric Statistics
Statistical Methods Development

Professional Experience

University of Utah, November 2021–Present Division of Epidemiology *Research Assistant Professor*.

University of Southern California, 2015–November 2021 Department of Preventive Medicine *Research Programmer*. As a senior research staff, I closely collaborate with researchers across the University. Besides providing technical support and educating community members on topics such as High-Performance-Computing and Statistical Computing–onsite workshops and presentations–, I actively contribute to grant-writing, leading research projects, and presenting to funding institutions–including NIH and DoD–and international conferences. Since August 2020, I also serve as a co-instructor for the Introduction to Data Science class of the Department's master's in Health Data Science program.

Chilean Pension Supervisor (Pension System Watchdog), August 2011– August 2014 Research Division *Analyst*. My main responsibilities were: Conducting statistical and econometric analysis of the Chilean unemployment insurance, developing scientific software to deal with big data, and serve as a bridge between the IT and Research divisions.

Nodos Chile Social Network Analysis Ltda., January 2012–January 2014 *Partner*. Founding partner of one of the first applied SNA Consultancy Entrepreneurship in Chile.

Universidad Adolfo Ibáñez, January 2011–June 2012. School of Government *Adjunct Professor*. Taught Introductory courses of Economics, Microeconomics and Statistical computing with Stata.

Chilean Ministry of Social Planning, March 2011–December 2011. Social Programs Monitoring *Analyst*. Survey and Analysis of the Government social programs supply and supporting the Monitoring Division with the Open-Data Initiative.

Peer Reviewed Publications

[1] Marian-Gabriel Hâncean, Matjaž Perc, Adrian Gheorghiță, et al. "The formation of political discussion networks". In: *Royal Society Open Science* 9.1 (Jan. 2022), p. 211609. URL: https://royalsocietypublishing.org/doi/abs/10.1098/rsos.211609.

[2] **George G. Vega Yon**, Andrew Slaughter, and Kayla de la Haye. "Exponential random graph models for little networks". In: *Social Networks* 64 (2021). **(Top 10 most downloaded articles–since December 2020–from Social Networks as of June 6, 2021.)**, pp. 225–238. URL: https://doi.org/10.1016/j.socnet.2020.07.005.

[3] **George G. Vega Yon**. "Building, Importing, and Exporting GEXF Graph Files with rgexf". In: *Journal of Open Source Software* 6 (June 2021), p. 3456. URL: https://doi.org/10.21105/joss.03456.

[4] **George G.**. **Vega Yon**, Duncan C. Thomas, John Morrison, et al. "Bayesian parameter estimation for automatic annotation of gene functions using observational data and phylogenetic trees". In: *PLOS Computational Biology* 17.2 (Feb. 2021), pp. 1–35. URL: https://doi.org/10.1371/journal.pcbi.1007948.

[5] Thomas W. Valente and **George G. Vega Yon**. "Diffusion/Contagion Processes on Social Networks". In: *Health Education & Behavior* 47.2 (2020), pp. 235–248. URL: http://journals.sagepub.com/doi/10.1177/1090198120901497.

[6] Kayla de la Haye, Heesung Shin, **George G. Vega Yon, et al.** "Smoking Diffusion through Networks of Diverse, Urban American Adolescents over the High School Period". In: *Journal of Health and Social Behavior* 60.3 (2019), pp. 362–376. URL: https://doi.org/10.1177/0022146519870521.

[7] Thomas W. Valente, Heather Wipfli, and **George G. Vega Yon**. "Network influences on policy implementation: Evidence from a global health treaty". In: *Social Science and Medicine* 222 (2019), 188–197. URL: http://www.sciencedirect.com/science/article/pii/S0277953619300085.

[8] **George G. Vega Yon** and Brian Quistorff. "parallel: A command for parallel computing". In: *The Stata Journal: Promoting communications on statistics and Stata* 19.3 (Sept. 2019), pp. 667–684. URL: http://journals.sagepub.com/doi/10.1177/1536867X19874242.

[9] **George G. Vega Yon** and Paul Marjoram. "fmcmc: A friendly MCMC framework". In: *Journal of Open Source Software* 4.39 (July 2019), p. 1427. URL: http://joss.theoj.org/papers/10.21105/joss.01427.

[10] **George G. Vega Yon** and Paul Marjoram. "slurmR: A lightweight wrapper for HPC with Slurm". In: *Journal of Open Source Software* 4.39 (July 2019), p. 1493. URL: https://joss.theoj.org/papers/10.21105/joss.01493.

[11] Brooke M. Bell, Donna Spruijt-Metz, **George G. Vega Yon**, et al. "Sensing eating mimicry among family members". In: *Translational Behavioral Medicine* 9.3 (May 2019), pp. 422–430. URL: https://doi.org/10.1093/tbm/ibz051.

[12] Jorge Fábrega Lacoa and **George G. Vega Yon**. "El impacto del rating televisivo sobre la actividad en Twitter: evidencia para Chile sobre la base del evento TELETÓN 2012". In: *Cuadernos.info* 33 (Dec. 2013), pp. 43–52. URL: http://cuadernos.info/index.php/CDI/article/view/533.

Work in Progress and Technical Reports

[1] Marie L. Ouellet, Sadaf Hashimi, and **George G. Vega Yon**. "Network dynamics of officer-involved shootings". under review.

[2] **George G.**. **Vega Yon**, Duncan C. Thomas, John Morrison, et al. "Bayesian parameter estimation for automatic annotation of gene functions using observational data and phylogenetic trees". 2021.

[3] **George G. Vega Yon**. *Capital Necesario Unitario (CNU): Cálculo e Introducción Del Módulo de Stata CNU*. Working Papers 57. Superintendencia de Pensiones, Aug. 2014. URL: https://ideas.repec.org/p/sdp/sdpwps/57.html.

[4] Ximena Quintanilla, Isabel Poblete, **George G. Vega Yon**, et al. *Estudio Actuarial de los Fondos del Seguro de Cesantía*. Tech. rep. 2013.

[5] Andrea Repetto and **George G. Vega Yon**. *El Impacto de un Alza en la Cotización Previsional: Pensiones, Salarios y Empleo*. Tech. rep. 2013.

Software Packages

[1] **George G. Vega Yon**. *rgexf: Build, Import and Export GEXF Graph Files* (2020). R package version 0.16.0. URL: https://CRAN.R-project.org/package=rgexf.
downloads 553K

[2] **George G. Vega Yon**, Thomas Valente. *netdiffuseR: Analysis of Diffusion and Contagion Processes on Networks* (2020). R package version 1.22.0. URL: https://github.com/USCCANA/netdiffuseR.
downloads 24K

[3] **George G. Vega Yon**, Kayla de la Haye. *ergmito: Exponential Random Graph Models for Small Networks* (2020). R package version 0.3-0. URL: https://cran.r-project.org/package=ergmito.
downloads 9188

[4] **George G. Vega Yon**. *slurmR: A Lightweight Wrapper for 'Slurm'* (2020). R package version 0.4-1. URL: https://CRAN.R-project.org/package=slurmR.
downloads 7441

[5] **George G. Vega Yon**. *fmcmc: A friendly MCMC framework* (2020). R package version 0.3-0. URL: https://CRAN.R-project.org/package=fmcmc.
downloads 11K

[6] **George G. Vega Yon**. *barry: your to-go motif accountant* (2020). C++ library version 0.0-1. URL: https://github.com/USCbiostats/barry.

[7] **George G. Vega Yon**. *pruner: Implementing the Felsenstein's Tree Pruning algorithm* (2020). C++ library version 0.0-1. URL: https://github.com/USCbiostats/pruner.

[8] **George G. Vega Yon**, Brian Quistorff. *parallel: Stata Module for Parallel Computing* (2019). Stata Module version 1.20.0. URL: https://github.com/gvegayon/parallel.

[9] **George G. Vega Yon**. *aphylo: Statistical Inference of Annotated Phylogenetic Trees* (2019). R package version 0.1.99. URL: https://github.com/USCbiostats/phylogenetic.

[10] **George G. Vega Yon**. *netplot: Beautiful graph drawing* (2019). R package version 0.0.9000. URL: https://github.com/USCCANA/netplot.

[11] **George G. Vega Yon**. *googlePublicData: Working with Google's 'Public Data Explorer' DSPL Metadata Files* (2017). R package version 0.16.1. URL: https://CRAN.R-project.org/package=googlePublicData.


[12] **George G. Vega Yon**, Enyelbert Muñoz. *ABCoptim: Implementation of Artificial Bee Colony (ABC) Optimization* (2017). R package version 0.15.0. URL: https://CRAN.R-project.org/package=ABCoptim.


[13] **George G. Vega Yon**. *twitterreport: Out-of-the-box analysis and reporting tools for twitter* (2016). R package version 0.16. URL: https://doi.org/10.5281/zenodo.44528.

Conference Talks

[1] Marie Ouellet, Sadaf Hashimi, and **George G. Vega Yon**. "Network Influence in Officer Firearm Use". In: NETWORKS 2021 - A Joint Sunbelt and NetSci Conference. (conference talk). July 2021.

[2] **George Vega Yon**. "Triads, Dyads, and Gene Functions - When Social Network Analysis Meets Phylogenetics". In: NETWORKS 2021 - A Joint Sunbelt and NetSci Conference. (conference talk). July 2021.

[3] **George G. Vega Yon**, Aileen Dinkjian, Sarah Hamm-Alvarez, et al. "ERGMito Statistical Models for Small Team Social Networks". In: SciTS 2020. (conference talk, slides/video). June 2020.

[4] **George G. Vega Yon**, Andrew Slaughter, and Kayla de la Haye. "Exact Statistics and Semi-Parametric Tests for Small Network Data". In: IC2S2, 2019. (conference talk, slides). July 2019.

[5] **George G. Vega Yon**, Andrew Slaughter, and Kayla de la Haye. "Exact Statistics and Semi-Parametric Tests for Small Network Data". In: Sunbelt 2019. (conference talk, slides). June 2019.

[6] **George G. Vega Yon** and Kayla de la Haye. "Small network statistics for the network science of teams". In: NetSciX 2019, SCL. (conference talk, slides). Jan. 2019.

[7] **George Vega Yon**. “Computacion de Alto Rendimiento con R”. In: satRday Santiago 2018. (conference workshop, slides). Dec. 2018.

[8] **George G. Vega Yon** and Kayla de la Haye. “Big Problems for Small Networks: Small Network Statistics”. In: NASN 2018, DC. (conference talk, slides). Nov. 2018.

[9] **George G. Vega Yon**, Kayla de la Haye, Hee-sung Shin, et al. “Diffusion of Smoking Initiation Among Diverse, Urban American Adolescents Over The High School Period”. In: NASN 2017. (conference talk, slides). July 2017.

[10] **George G. Vega Yon** and Brian Quistorff. “Uncomplicated Parallel Computing with Stata”. In: Stata Conference 2017. (conference talk, slides). July 2017.

[11] **George G. Vega Yon** and Thomas W. Valente. “Understanding Diffusion with netdiffuseR”. In: NASN 2017. (conference workshop, slides). July 2017.

[12] **George G. Vega Yon** and Thomas W. Valente. “Network Diffusion of Innovations in R: Introducing netdiffuseR”. In: IC2S2, 2016. (conference poster, slides). June 2016.

[13] **George G. Vega Yon** and Thomas W. Valente. “Network Diffusion of Innovations in R: Introducing netdiffuseR”. In: useR! 2016. (conference talk, slides/video). June 2016.

[14] **George G. Vega Yon** and Thomas W. Valente. “Understanding Diffusion with netdiffuseR”. In: Sunbelt Conference, 2016. (conference workshop, slides/video). Mar. 2016.

[15] **George Vega Yon**. “Just tired of endless loops! or parallel: Stata module for parallel computing”. In: Stata Conference, 2013. (conference talk, slides). July 2013.

Invited Speaker

[1] “Triadas, lazos y funciones genéticas: cuando las redes sociales y la filogenética se encuentran”. In: Seminario de Data Science. (invited talk, slides/video). May 2021.

[2] “Triads, Dyads, and Gene Functions - When Social Network Analysis Meets Phylogenetics”. In: Computational Cancer Genomics Working Group Evening Lecture. (invited talk, slides/video). Mar. 2021.

[3] “"Predicción de funciones genéticas utilizando evidencia experimental y árboles filogenéticos: Un modelo evolutivo" o "Ciencia de datos en la práctica"”. In: PUC Mathematical and Computational Engineering Seminars. (invited talk, slides). Apr. 2020.

[4] “A Brief Introduction to Using R for High-Performance Computing”. In: Orange County R Users Group. (invited talk, slides/video). Aug. 2019.

[5] “Big Problems for Small Networks: Statistical Analysis of Small Networks and Team Performance”. In: UCI Social Network Research Group. (invited talk, slides). Apr. 2019.

[6] “Big Problems for Small Networks: Statistical Analysis of Small Networks and Team Performance”. In: SONIC Speaker. (invited talk, slides/video). Mar. 2019.

[7] “Estadística de Redes y Econometría Espacial (con R)”. In: IMFD Summer School. (invited talk, slides/video). Dec. 2018.

Other Talks

[1] “A Crash course on git”. In: Happy Scientist Seminar. (workshop, slides/video). Mar. 2021.

[2] “HPC with Slurm, R, and the slurmR R package”. In: Happy Scientist Seminar. (workshop, slides/video). Feb. 2021.

[3] “Essays on Bioinformatics and Social Network Analysis: Statistical and Computational Methods for Complex Systems”. In: Doctoral Defense. (talk, slides). June 2020.

[4] “Essays on Bioinformatics and Social Network Analysis Statistical and Computational Methods for Complex Systems”. In: Biostats Seminars. (talk, slides/video). Jan. 2020.

[5] “slurmR workshop”. In: Happy Scientist Semminar Series. (workshop, slides). Jan. 2020.

[6] “Happy Scientist Seminar: Research Pipelines”. In: Happy Scientist Seminar. (talk, slides). Oct. 2019.

[7] “What drives social networks? A gentle introduction to exponential random graph models (with a focus on small networks)”. In: East LA R User Group. (talk, slides). June 2019.

[8] “Overview of Social Network Models”. In: (talk, slides). Dec. 2018.

[9] “A brief introduction to using R for high-performance computing”. In: East LA R User Group. (talk, slides). Nov. 2018.

[10] “R Bootcamp for Scientific Computing 2018”. In: R Bootcamp for Scientific Computing. (workshop, slides). Aug. 2018.

[11] “Intro to R”. In: USC’s HPCC workshop. (workshop, slides). July 2018.

[12] “Introduction to R (for HPC users)”. In: USC’s HPCC workshop. (workshop, slides). July 2018.

[13] “Reproducible Research”. In: Health Behavior Research Students talk. (talk, slides). Sept. 2016.

Teaching

(PM 566) Introduction to Health Data Science Fall 2021
University of Southern California, USA
Instructor, Masters of Science in Public Health Data Science

(PM 566) Introduction to Health Data Science Fall 2020
University of Southern California, USA
Co-instructor, Masters of Science in Public Health Data Science

Statistical Computing with Stata First semester 2012
Universidad Adolfo Ibáñez, Chile
Instructor, Masters in Economics and Public Policy

Introduction to Economics First semester 2012
Universidad Adolfo Ibáñez, Chile
Co-instructor, B.A. in Business Administration

Microeconomics Second semester 2012
Universidad Adolfo Ibáñez, Chile
Co-instructor, B.A. in Business Administration

Introduction to Economics First semester 2011
Universidad Adolfo Ibáñez, Chile
Co-instructor, B.A. in Business Administration

Honors and Services to the Profession

Manuscript Review (Ad Hoc)
The Official Journal of The Society for Computational Economics
The R Journal
The Stata Journal
Social Networks
Journal of Mathematical Sociology
Computer Methods and Programs in Biomedicine Update
Journal of Open Source Software
Bioinformatics

Abstract Review
International Conference on Computational Social Science (2019–2021)
SUNBELT Conference (2016)

Book Review
"Microeconometrics and Matlab: An Introduction", by Adams, Clarke and Quinn, Oxford University Press, 2015.
"Mastering Gephi Network Visualization", by Ken Cherven, Packt Publishing, 2015.

"Network Graph Analysis and Visualization with Gephi", by Ken Cherven, Packt Publishing, 2013.

Misc

Co-organizer of the USC Networks Meeting (2020, 2021)
Founder of the (first) R Users Group in Chile (2013)
Co-organizer of the East LA R User Group (LAERUG).

Software

R, C++, LaTeX, SQL, XML, regex, Stata+Mata, VBA, Gephi, Pajek, Mathematica, MS Suit, Git, Unix, Docker, Visual Studio Code

last update: January 26, 2022

https://ggvy.cl